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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,924	09/14/2006	Yuji Furuuchi	117454-003	2128
29175	7590	04/08/2009	EXAMINER	
K&L Gates LLP P. O. BOX 1135 CHICAGO, IL 60690			RAMADAN, RAMY O	
			ART UNIT	PAPER NUMBER
			2838	
			MAIL DATE	DELIVERY MODE
			04/08/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,924	Applicant(s) FURUUCHI ET AL.	
	Examiner RAMY RAMADAN	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 01/09/2009 have been fully considered but they are not persuasive.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 6, 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Applicant Admitted Prior Art (APA).**

As per claim 6, APA discloses and shows in Fig. 7, a protection circuit (1Y) for protecting a battery pack (5) having rechargeable batteries (6) connected in series from over currents and over voltages, the protection circuit (1Y) comprising:

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a protection device (2B) having a heating resistor (3) and a fuse element (4) provided on a circuit board; and

sensing means (7) for detecting an over voltage across any of the batteries (6) in the battery pack (5) and switching a current flowing into the heating resistor (3),

wherein the fuse element (4) is melted in an over current condition, and in an over voltage condition on any of the batteries (6), and wherein the sensing means (7) switches on the current flowing into the heating resistor (3), thereby causing the heating resistor (3) to generate heat and the fuse element (4) to be melted,

wherein in an over voltage condition on any of the batteries (6), the sensing means (7) switches on the current flowing into the heating resistor (4), which would implicitly cause a voltage across a predetermined number of the batteries (6) (for example 4 batteries) in the battery pack (5) to be applied to the heating resistor (3) (Applicant's specification, Para [0002]-[0010]).

As per claim 9, APA discloses and shows in Fig. 6, a protection circuit (1X) for protecting a battery pack (5) having rechargeable batteries (6) connected in series from over currents and over voltages, the protection circuit (1X) comprising:

protection devices (2A) (2A comprises two protection devices, each one has a resistor and fuse, and both circuits are connected in parallel as shows in Fig. 6) each having a heating resistor (3) and a fuse element (4) provided on a circuit board; and

sensing means (7) for detecting an over voltage across any of the batteries (6) in the battery pack (5) and switching a current flowing into the heating resistor (3), wherein the plurality of protection devices (2A) are connected in parallel, wherein in an over current condition, the fuse element (3) is melted at each protection device, and

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wherein in an over voltage condition on any of the batteries (6), the sensing means (7) switches on the current flowing into the heating resistor (4), which would implicitly cause a voltage across a predetermined number of the batteries (6) (for example 4 batteries) in the battery pack (5) to be applied to the heating resistor (3) of each protection device, causing the heating resistor (3) to generate heat, and causing the fuse element (4) to be melted.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA (Admitted Prior Art).

APA discloses the claimed invention except for a plurality of sensing means. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device as discloses by APA to use a plurality of sensing means to sense an over voltage between batteries, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA, in view of Watarai et al. (JP 2003111268 A), hereinafter Watarai.

APA discloses the claimed invention except for that the heating resistor is connected with a rectifier element to prevent conduction resistance from remaining via the heating resistor when an over current has caused the fuse element to be melted incompletely.

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However, Watarai discloses and shows in Fig. 1, a secondary battery with overcharge protection circuit comprising: a constant voltage diode (24) (rectifying element) connected to a resistor (23) and a thermal fuse (31) (Abstract).

Watarai is evidence that ordinary workers in the art would find a reason, suggestion or motivation to modify the device as disclosed by APA to include a constant voltage diode connected to the resistor as taught by Watarai to prevent surcharge of a battery and prevent malfunction of the protection device (Machine translation, Para [0009] and [0016]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device as disclosed by APA to include a constant voltage diode connected to the resistor as taught by Watarai to prevent surcharge of a battery and prevent malfunction of the protection device (Machine translation, Para [0009] and [0016]).

Conclusion

7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAMY RAMADAN whose telephone number is (571) 272-9761. The examiner can normally be reached on Mon-Fri 7:30 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm Ullah can be reached on (571) 272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Akm Enayet Ullah/
Supervisory Patent Examiner, Art Unit 2838

/Ramy Ramadan/
Examiner
Art Unit 2838

/RR/